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Conference Abstract

WFO-IDs: Unique Identifiers for All Known Plants Managed by the World Flora Online

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Abstract

The World Flora Online (WFO) project (Borsch et al. 2020) was initiated in 2012 in response to Target 1 of the Global Strategy for Plant Conservation*[1], "To create an online flora of all known plants by 2020" (Wyse Jackson and Kennedy 2009). A WFO Consortium of over 40 international institutions has been formed. The World Flora Online Public Portal*[2] is built upon a taxonomic backbone of plant taxonomic data that integrates the International Plant Name Index (IPNI)*[3], World Checklist of Vascular Plants (WCVP)*[4], Tropicos*[5], Angiosperm Phylogeny Group 4*[6], Pteridophyte Phylogeny Group (PPG I 2016), supplemented by the Global Compositae Checklist*[7], Solanaceae Source*[8], and others. To facilitate the ongoing curation of the WFO backbone, identifiers called WFO-IDs have been created for each of the over 1.59 million names included in WFO. WFO-IDs are comprehensive for all known plants, both vascular and non-vascular except algae. IPNI-IDs are limited to vascular plants and do not give the current taxonomic status of the name. WFO-IDs also cover invalid designations, i.e., some effectively published “names” like orthographic variants that have been used in taxonomic literature, so that their invalid status is made explicit. WFO IDs follow FAIR principles (Findable, Accessible, Interoperable, and Reusable). Relationships between WFO-IDs are also recorded by the WFO Taxonomic Backbone, including synonymy and homonymy, and are accessible via the WFO Portal. WFO is continuously updating the taxonomic backbone by engagement of

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new plant Taxonomic Expert Networks (TENs) focused on selected plant groups. WFO also includes over 500,000 descriptive data items gathered from digital floras and monographs, and other sources. Descriptive data can be text descriptions, images, geographic distributions, identification keys, phylogenetic trees, threat status, lifeform or habitat. Descriptive data records are all assigned a WFO-ID, if they are new to WFO, by a name matching process with the WFO Taxonomic Backbone. A new tool called Rhakhis (Hyam et al. 2022), developed at Royal Botanic Garden, Edinburgh, is used to manage the WFO Taxonomic Backbone data and includes APIs to access the versioned backbone data. This presentation will review the origins and history of WFO-IDs and how they are being used for the World Flora Online.

Keywords

plant taxonomy, plant conservation, Rhakhis

Presenting author

Chuck K Miller and Walter Berendsohn

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Hosting institution

The World Flora Online portal is hosted by Missouri Botanical Garden

Conflicts of interest

The authors have declared that no competing interests exist.

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Endnotes

*1 https://www.cbd.int/gspc/targets.shtml
*2 http://www.worldfloraonline.org/
*3 https://www.ipni.org/
*4 https://powo.science.kew.org/about-wcvp
*5 https://www.tropicos.org/
*6 http://www.mobot.org/MOBOT/research/APweb/
*7 https://www.compositae.org/gcd/
*8 https://solanaceaesource.myspecies.info/